

Green hydro wash – the planning application to extend the Ben Glas hydro scheme by Loch Lomond

Description



View of north facing slopes of Ben Glas where it is proposed to construct a 1.5km pipeline to channel water into the existing scheme, starting from the highest point of the track visible on the right side of photo. Photo taken May 2018.

In March, a Planning Application ([see here](#)) was submitted to the Loch Lomond and Trossachs National Park Authority (LLTNPA) to add five new intakes to the Ben Glas run of river hydro scheme, above the Eagle Falls at the head of Loch Lomond. Parkswatch has covered this scheme before, ([see here](#)) and ([here](#)) for example, and argued it should have never been built.

Seven months and 89 documents after the latest application, there has not been a single comment

from anyone except the statutory consultees, but still no decision. That is perhaps a positive thing, a sign that LLTNPA planners are at last starting to realise that their unconditional backing of hydro developments has in fact served to undermine the statutory purpose of our National Parks, which includes the need to address climate change. This post takes a look at the issues.

The reason for the application

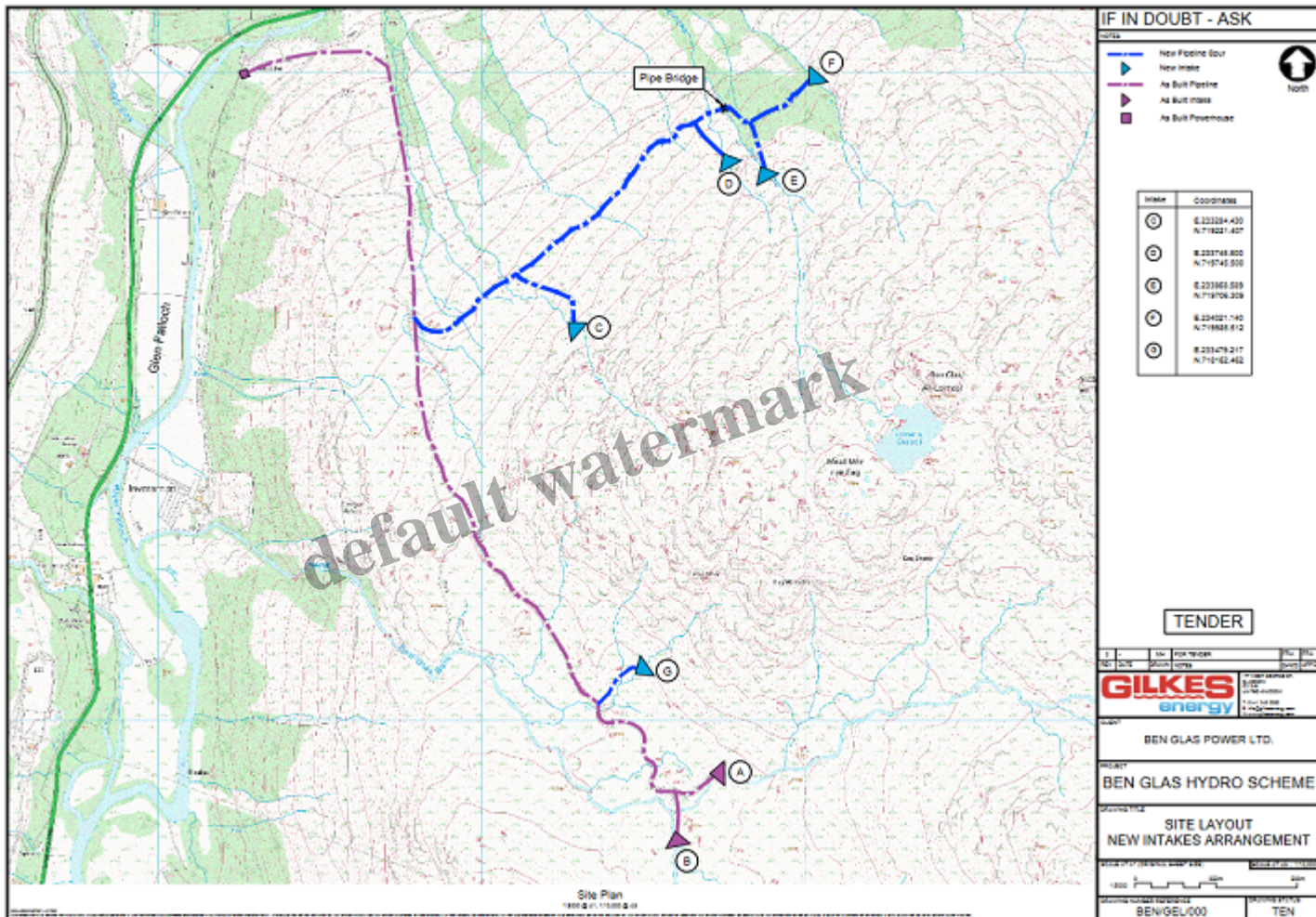
Since the UK Government abolished the Feed In Tariff for run of river hydro schemes new developments have dried up. Hundreds of people who made a living out of the hydro rush, paid for by the public through higher electricity prices, have lost their jobs or had to move on to other work. A few are still involved in completing schemes such as the seven in Glen Etive which were granted planning approval just before the FIT was abolished.



The destruction in Glen Etive, one of Scotland's finest landscapes, continues

Others such as Gilkes Energy, the applicants in this case, have been clinging on in the greatly reduced market. Since new schemes are generally no longer profitable enough to find backers, attention has shifted to expanding existing schemes and channelling more water through existing turbine capacity. That is what is behind the Ben Glas proposal where:

“the extended scheme will remain at 1.3 MW, however the turbine will generate electricity for longer periods”.



c – g marks new turbines, the blue line new sections of pipe

The planning application is to create five new intakes, partially pre-fabricated out of steel rather than the usual concrete, and linked by over 1.5km of new plastic pipeline. Both the intakes and the pipes are small in size and will increase overall flow of water through the existing scheme by around 10%.

Ben Glas Power, the company that owns the Ben Glas hydro scheme is highly profitable. The scheme opened in September 2016, at which point its tangible assets were valued as £3,713,889 but, after its debt was taken into account, it was left with net assets valued as £2,444. Just four years later those net assets had increased to almost £2m:

Ben Glas Power Limited

Statement of financial position
As at 30 September 2020

	Notes	£	2020 £	£	2019 £
Fixed assets					
Tangible assets	4		3,543,240		3,620,267
Current assets					
Debtors	5	148,155		181,750	
Cash at bank and in hand		224,947		134,494	
		<u>373,102</u>		<u>316,244</u>	
Creditors: amounts falling due within one year	6	(491,635)		(388,779)	
Net current liabilities			<u>(118,533)</u>		<u>(72,535)</u>
Total assets less current liabilities			<u>3,424,707</u>		<u>3,547,732</u>
Creditors: amounts falling due after more than one year			(1,370,359)		(1,837,632)
Provisions for liabilities			<u>(130,092)</u>		<u>(105,631)</u>
Net assets			<u>1,924,256</u>		<u>1,604,469</u>
Capital and reserves					
Called up share capital	8		10,000		10,000
Equity reserve			305,487		437,411
Profit and loss reserves			<u>1,608,769</u>		<u>1,157,058</u>
Total equity			<u>1,924,256</u>		<u>1,604,469</u>

The directors of the company have elected not to include a copy of the income statement within the financial statements.

These financial statements have been prepared and delivered in accordance with the provisions applicable to companies subject to the small companies regime.

As a small company, Ben Glas Power is exempt from providing details of its income and expenditure in its accounts, but the balance sheet (£1,924,256) indicates that, after operating expenses, it has made almost £500k profit a year since it started operation. All else being equal, by increasing the amount of water flowing through the turbine by 10%, the proposal before the LLTNPA would likely to increase those profits by 10% or £50k a year.

In short, this planning application, like almost every other run of river hydro scheme in Scotland (there are a few community exceptions), is primarily about making money.

Potential environmental impacts of the scheme

The landscape impact of the scheme is likely to be small from a distance (see photo above), particularly since no tracks, temporary or otherwise, are proposed. However, the intakes will impound pools that will silt up and need to be regularly excavated and this will have a local impact:



Figure 4: Looking from Intake G to the tie in with existing penstock pipeline at the vehicles.

The upper burn from which it is proposed to divert water into the existing pipeline.
Photo credit Environmental Statement, Gilkes Energy.

The Environmental Statement claims the impacts of impounding and diverting water will be benign but how many burns can you do this to before the hydrology, freshwater ecology and wider ecology of the entire area is affected? The Scottish Environmental Protection Agency in its response to the Planning Application declines to comment on this issue but does reveal that the LLTNPA 'internal specialists' are looking at the "ecological and water environment matters associated with the project". Parkswatch has been calling for this in respect of run of river hydro developments for some time, so its very welcome that LLTNPA ecologists are now considering the issues. Whether they will be allowed to advocate a precautionary approach in the absence of research is another matter.



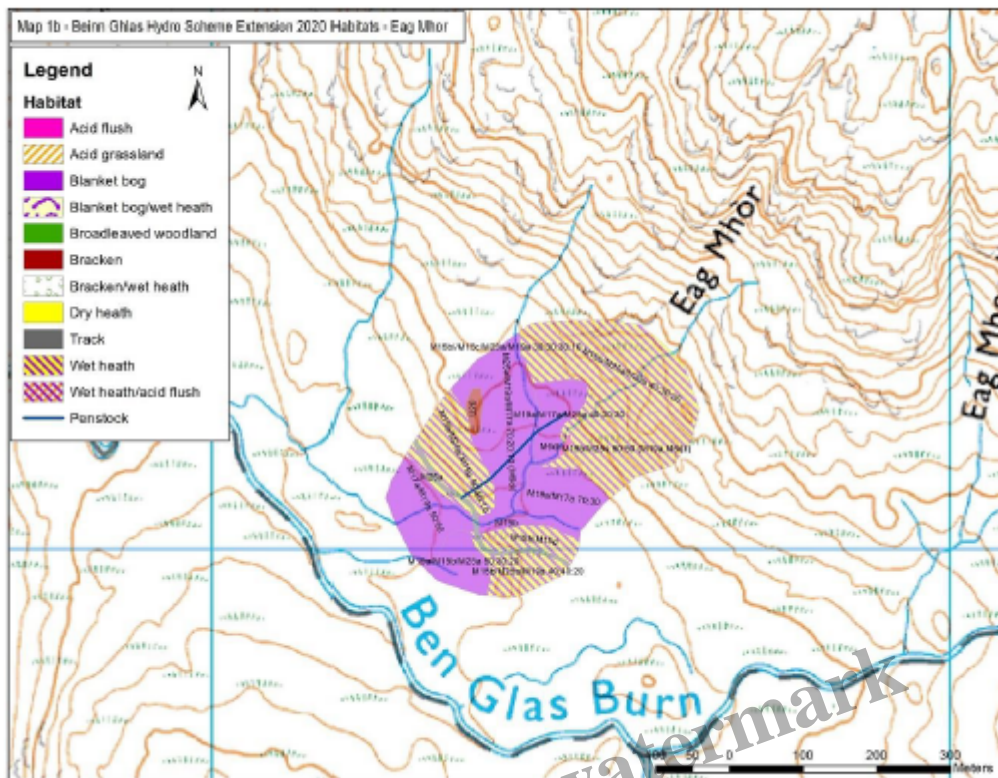
49	234027	719987	Proposed intake location with trees requiring to be felled marked in the photograph (above right). These were checked for potential bat habitat with none present. Surrounding vegetation is a mosaic of <i>Pteridium aquilinum</i> , <i>Molinia caerulea</i> and wet heath/acid flush vegetation. Photographs BGH50-52 above right and below.
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The photos in the ecological survey portray a rather different picture to the Environmental statement, another attractive burn that is threatened with destruction.

The carbon impact of the proposal

The Environmental Assessment states that “*the diversion intakes will make a small but positive impact to climate change. However this chapter focuses on the impact climate change will have on the proposed development.*” While it “anticipates” that the schemes will be able to withstand the sort of extreme weather events that caused severe damage to some of the existing Glen Falloch hydro schemes ([see here](#)), no evidence is provided to substantiate the first part of the claim.

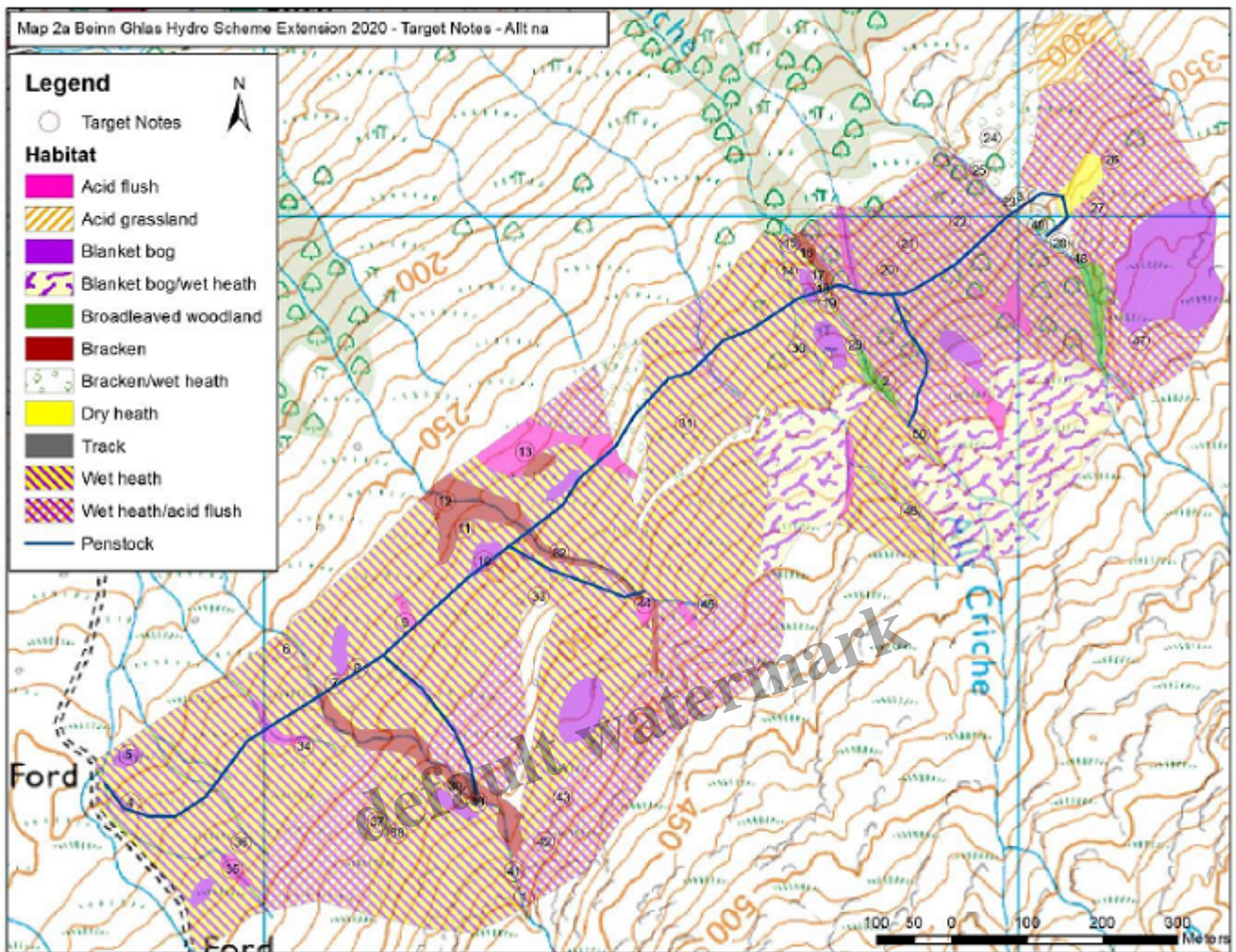
The Environmental Statement avoids addressing the carbon impacts of the development, although it should be quite possible to calculate these. First there are the fossils fuels that will be used in the construction process and in fabricating the steel intakes. Second the concrete that will be used to secure the intakes and construct the wing walls. Third, there is the quantity of petrochemicals that will be needed to fabricate over 1.5km of polyethylene, i.e plastic, pipe. And fourth there is the quantity of peat that may be damaged by the construction of the pipeline.



Pipeline (blue) to intake G

The vegetation survey submitted as part of the Environmental Statement shows that the developer proposes to install pipeline through an area of blanket bog (visible in photo above). The Scottish Government has prioritised the protection of blanket bog because of its importance as a carbon sink. Because of that there is now a policy presumption against planting trees on blanket bog and deep peat, although there is still a debate about what counts as deep (30cm or 50cm?).

The proposed pipeline will require peat and soil to be removed before being buried in a trench. This will result in some short-term peat loss but could also alter the hydrology of the bog leading to more extensive release of carbon into the atmosphere. How this is compatible with the peatbog restoration that the LLTNPA has been paying for just above the existing hydro intakes at Ben Glas is unclear.



As the ecological survey states “most of the proposed route for the pipelines runs through extensive wet heath and *Molinia caerulea* [Purple Moor Grass] dominated wet heath habitat, with smaller areas of blanket bog occurring where the ground flattens, and peat has been able to accumulate”.

Wet heath too creates peat and indeed can be a forerunner to the formation of blanket bog but, as the ecological survey of the site shows, blanket bog can also develop on steep slopes:

51	233404	718022	Steep bank supporting M19c blanket bog. <i>Calluna vulgaris</i> dominates with abundant <i>Vaccinium myrtillus</i> and frequent <i>Vaccinium vitis-idaea</i> . <i>Rubus chamaemorus</i> (photograph below right) is also frequent and flowering. Additional species noted include <i>Melampyrum pratense</i> and <i>Potentilla erecta</i> with the
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25

			bryophyte layer mainly a mix of <i>Sphagnum capillifolium</i> , <i>Rhytidiadelphus loreus</i> , <i>Hylocomium splendens</i> and <i>Pleurozium schreberi</i> . Photographs BGH55/56 (below).
			

The Construction Method Statement confirms that significant amounts of peat will be disturbed:

“Peat turves should be a minimum of 300mm thick. Peat turves for the pipeline will be replaced within two weeks of removal. Where turves cannot be reused immediately (for example from the immediate banks of the intakes, where they are permanently removed) they will be kept aside for use on restoration in similar areas.”

Despite this, the application makes no attempt to assess how carbon might be released into the atmosphere from burying the pipeline or how far it might impact on how peat accumulates here in future.

There are therefore very serious questions about the carbon impact of the proposed extension to the Ben Glas hydro and whether it will actually have any beneficial impact in terms of climate change. Consideration of that should be central to the decision about whether to approve or reject this application.

Who would benefit from the extension to this scheme?

The Planning Application reveals that “Ben Glas Power Ltd’s lease arrangements on the existing scheme will run for a further 36 years, after which ownership of the scheme is transferred to the landowner” while the accounts show that the company has a commitment “*for future minimum lease payments*” of £684,785. That is just under £20k a year that could, if the landowner decides, potentially be invested back into the local area. That amount could increase slightly as a result of the proposed extension and its possible the estate could take the opportunity to negotiate an increase in current rent payments.

While Ben Glas Power has no permanent employees locally – it and a number of other hydro schemes appear to be controlled from a centre in Paisley – it does use estate staff to maintain the scheme. That provides a fraction of a job in the local area. Apart from that, Ben Glas Power appears to have brought very little benefit to the local economy or to the National Park

The people who ultimately benefit from the £500k profits that derive from the FIT are hidden behind the usual web of companies through which the rich and powerful now operate. Gilkes Hydro Investments Ltd, which besides Ben Glas Power owns a cluster of hydro schemes in the Lake District, is owned by GHI Holdings Ltd. In December 2020 around 42% of GHI’s shares were bought by a company called Gravis Hydro Holdings Ltd, which is itself owned by Gravis Asset Holdings Ltd. In August 2021 Gravis Assets declared it was controlled by “Mourant Corporate Trustee (Jersey) Limited”, i.e owned by people whose interests are hidden in a tax haven.

Following the money through this dark web on the basis of information contained in company accounts, however, is an impossible task. What you can see, however, is that while the individual companies providing hydro power are financially sound and highly profitable, thanks to the FIT payments, those owning them are not.

GHI Holdings reported the financial position of it’s subsidiaries as follows in its accounts until September 2020 ([see here](#)):

8 Subsidiaries (continued)

The aggregate capital and reserves and the profit/(loss) for the year of the subsidiaries noted above was as follows:

Name of undertaking	Profit/(Loss)	Capital and Reserves
	£	£
Attadale Grid Limited	-	35
Ben Glas Power Limited	319,787	1,924,256
Blencathra Hydro Limited	552,389	4,567,328
Frenich Hydro Limited	90,854	824,108
GHI Bidco Limited	(782)	434,792
GHI Taodail Limited	-	4,901
Gilkes Hydro Investments Limited	(1,251,745)	(2,570,272)
Goldeneye Renewables Limited	232,957	2,168,954
Goshawk Energy Limited	191,028	2,020,637
Great Gable Energy Limited	99,216	854,519
Honister Energy Limited	16,927	705,984
Kirkstone Energy Limited	134,598	1,395,602
Nightjar Sustainable Power Limited	596,905	7,739,193
Osprey Green Power Limited	219,997	4,635,590
Redstart Renewables Limited	260,010	2,396,718
Whinlatter Energy Limited	418,167	2,932,621

All except Gilkes Hydro Investments in a strong financial position. But in the same year GHI itself reported a loss of £198,072:

GHI Holdings Limited

Group income statement

For the year ended 30 September 2020

	Notes	2020 £	2019 £
Turnover		10,498,446	9,150,288
Administrative expenses		(8,915,548)	(5,716,238)
Other operating income		180	2,169
Operating profit		1,583,078	3,436,219
Interest receivable and similar income	3	625,380	590,428
Interest payable and similar expenses	4	(1,202,437)	(1,458,861)
Other gains and losses		(271,179)	(342,564)
Profit before taxation		734,842	2,225,222
Tax on profit		(932,914)	(902,424)
(Loss)/profit for the financial year		(198,072)	1,322,798

The loss for the financial period is all attributable to the owners of the parent company.

What explains the £8,915,548 in Administrative Expenses which appears to have wiped out the income from its subsidiaries? Where is that money, that is paid for us the public through FIT payments, going?

Move higher up the chain and the last accounts for Gravis Assets Holdings show a significant £15,996,000 loss (up from £2,346,000 the previous year):

GRAVIS ASSET HOLDINGS LIMITED

GROUP STRATEGIC REPORT
FOR THE YEAR ENDED 31 DECEMBER 2019

Introduction

The directors present their strategic report for the Group for the period ended 31 December 2019.

Business review

The principal activity of the Group during the year continued to be the investment in and generation of energy from renewable sources. During the prior period the Group was incorporated and acquired multiple assets engaging in the provision of renewable energy.

The Group's turnover for the period amounted to £38,873,000 (2018 - £28,748,000) with a loss after taxation of £15,996,000 (2018 - £2,346,000). As at 31 December 2019 the Group has net liabilities of £18,341,000 (2018 - £2,345,000). The Company generated a loss after taxation of £2,204,000 (2018 - £1,138,000) and as at 31 December 2019 has net liabilities of £3,341,000 (2018 - £1,137,000).

How a company whose balance sheet records net liabilities of £18,841,000 managed to buy a controlling interest in GHI Holdings is unclear but then Highlands and Islands Enterprise failed to prevent a similar financial basket case of a company, Natural Assets Investment Ltd, from acquiring Cairngorm Mountain Ltd ([see here](#)).

The statement of going concern in the accounts also reveals that Gravis was being audited by Ofgem in relation to its entitlement to receive Renewable Energy Certificates:

Going concern

The Group has been loss making and is in a net liability position at the period end date. The Group forms a financing structure investing in and providing loans to subsidiary companies engaged in the generation of renewable energy. The Group's business model is structured to ensure that actual cash inflows from the generation and sale of renewable energy exceed the Group's cash outflows to service creditors and other overheads over the loan term.

At the date of this report twenty-six of the Group's subsidiaries are currently being audited by the Office of Gas and Electricity Markets (OFGEM), the energy regulator, in relation to their accreditations and entitlements to receive Renewable Obligation Certificates (ROCs). OFGEM has the authority to, amongst other things, withdraw ROC accreditation in cases of material non-compliance. If this was to occur it would impact the income generation of subsidiary companies and their subsequent ability to service Group financing obligations.

The directors, based on the legal advice received, do not have grounds to believe that the ROC accreditation will be withdrawn, however the audits remain ongoing at this date and therefore there is a risk that the outcomes may be unfavourable.

I can find nothing on the Ofgem website about the outcome of that audit, but the experience of the renewable heat incentive scheme in Northern Ireland ([see here](#)), reinforces the view that it is private financial greed, rather than any green intentions, which is driving renewable energy development.

What needs to happen

It is time the LLTNPA took a stand and assessed run of river hydro planning applications on their merits, instead of assuming that all renewable energy developments are good. Even if it can be shown that the proposed extension of the Ben Glas scheme will, during its expected lifetime, have a net positive impact on carbon emissions, questions should be asked about when the "green" electricity produced will offset the fossil fuels that will be used in its construction. Is waiting 20 years for a tiny scheme like this to start paying for itself in carbon terms worth it, given the risks and the other potential environmental impacts? Isn't it time that the LLTNPA started to apply the precautionary principle to renewable energy developments in the National Park?

I might take a different view if the money that could be earned by this and other run of river hydro schemes was being invested in local communities or other green projects, paying for rural homes to be insulated, for example. But that is not on the agenda and, despite the spin, even the largest windfarms only offer tokenistic community benefits. The real money is being channelled out through the City.

Renewable energy development has been a lost opportunity in Scotland. Had we used pension funds, for example, to enable local communities and councils to develop hydro schemes – who would say no to 10% rates of return? – and had they gone to Scottish businesses for the parts, both rural and urban communities and the people of Scotland more generally might have benefited. Instead, both people and the environment lose, with the tacit consent of the political establishment.

Our National Parks should be different, they should be places which put nature and people first. Unfortunately, the LLTNPA Board has long delegated almost all planning decisions, including run of river hydro developments, to staff. With Board Members recently having spent three and half hours debating the merits of an 800m footpath in a Special Area of Conservation ([see here](#)), perhaps they could devote now a full day to considering the impacts of run of river hydro schemes? One would have thought that a 1.5km plastic pipeline through peat would merit that.

If enough people submit objections to this scheme (you can do so [here](#)), that might help force LLTNPA managers to refer the application to the Planning Committee for a decision.

Category

1. Loch Lomond and Trossachs

Tags

1. climate change
2. conservation
3. LLTNPA
4. renewables

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